# **SMG Stock Research Worksheet Guide**

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# Introduction

For years I had searched for a structured approach for analyzing a company's fundamentals so I could determine whether the company was well run. The books I read and the seminars I attended basically said:

"Choose quality companies."

"Be sure the company has quality management."

"Look at the P/E."

Those statements often ended the conversations I had and the seminars I took. But I would look at a company's P/E and wonder what it said about a company's management. I knew nothing more at the end of the book or seminar than I knew at the beginning. Then someone, Peter Lynch, gave specific standards for assessing the health of a company.

The criteria and parameters I use to identify quality stocks are based on the standards Peter Lynch, one of the all-time great investors, included in his book *One Up On Wall Street*. He was the first stock analyst to succinctly discuss specific guidelines for identifying a superior company.

I have developed a stock research worksheet to help organize the data and information I collected on companies. It has been used by the independent broker with whom I worked as a client. I have used it in my own investing for 20+ years and have taught it in my investing classes for nearly as long.

The worksheet's evaluative criteria will help your students identify quality companies. It is not a magic formula. It offers no guarantees of success. It is, however, a good starting point. Whatever their decision about a stock — *buy*, *follow*, *or abandon* — they will have based their decisions on sound data and information.

Nancy B. King, Alaska Coordinator The Stock Market Game™ Alaska Council on Economic Education











# **About the Worksheet**

Introduce the **Stock Research Worksheet** to your students as a tool for determining the health of a company. Most students are familiar with going to the doctor for a check-up. Have them discuss what doctors check when assessing an individual's health. As students generate ideas, list them on the board — *weight*, *blood pressure*, *heart rate*, *cholesterol count*, *etc*. Then discuss the characteristics of a healthy person.

Explain to them that just as we want to be healthy, we want the companies we invest in to be healthy; many are not. Have students discuss possible *signs* of a healthy company. Guide their thinking toward a company that makes a profit, increases its sales, maintains a good credit rating, and spends its money wisely to make more money. Write their suggestions on the board.

When they have finished generating ideas, discuss the *characteristics* of a healthy company, such as quality products and service, increased sales and profit, little debt, and good management.

The **Stock Research Worksheet** has your students check a company's sales and profit growth, determine its debt load, and rate its management. Using the evaluative guidelines, students will answer the yes and no questions. The total number of yes and no answers will indicate the general quality of the company — the greater the number of yes answers the healthier the company.

This worksheet may be used with any financial news and information site. However, it is best used with Morningstar.com.

# **Worksheet Outline**

- A. Company Profile
- B. Profitability
  - 1. Earnings Growth Rate
  - 2. Sales/Revenue Growth Rate
  - 3. Profit Margin
  - 4. PEG Ratio
- C. Financial Condition
- D. Institutional Ownership
- E. Stock Price
- F. Wrap-up Questions











# **Worksheet (Annotated Sample)**

### A. COMPANY PROFILE

Date	Enter the date you are colle	ecting your				
Source	Enter the URL for the website you are using for your research.					
Source	Enter the name of the company you are researching. Please use the company's					
Company	official name. For example "Pepsico" not" Pepsi"," Apple Inc." not "Apple".					
	Enter the company's ticker		Enter the company's primary			
Symbol	symbol.	Industry	industry.			

# 1. What does the company do?

Understand what you are buying. What are the company's products and services? Can you list and describe them to someone who knows nothing about the business? Does the company have a niche in the market? What makes the company's product or service stand out from others? Why do customers buy from this company? Is the company developing new products and services? Where is the company expanding? How is the company expanding — opening new units, buying other companies, developing new products/services?

## 2. Who are its closest competitors?

Choose companies whose businesses are as similar as possible. For example, Wendy's is a close competitor of McDonald's, but Cracker Barrel is not. Is a competitor a better company than the one you are investigating? By studying two or three companies in the same industry, you gain a greater understanding of the company, the industry, and fundamental analysis.

## 3. What is the company's history?

Who, how, where, and when did the company start? What were its first products or services? What is its history of ownership (what companies has it purchased or what various companies have owned it throughout its history)? Celebrate ingenuity, entrepreneurship, and success.







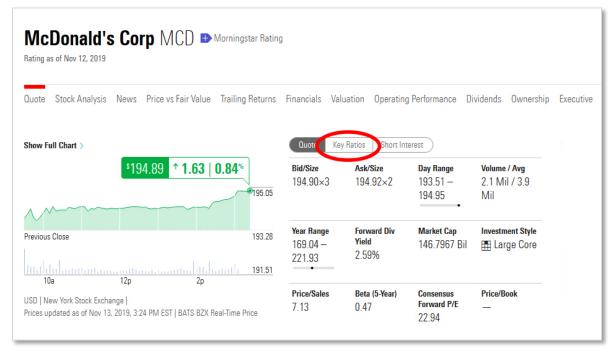




# **B. PROFITABILITY**

Earnings Growth Rate								
1. What is the company's earnings-per-share (EPS) growth rate?*								
		Year- Over-						
Last		Year						
Qtr	%	(1 yr.)	%	3-Year	%	5-Year	%	
Is the EPS growth rate increasing?					Yes		No	

<sup>\*</sup> You want your company's earnings to continually increase on an average of 13 to 25 percent, or higher, per year.



[Morningstar Data: click Key Ratios tab > select "Full Key Ratios Data"]









Revenue % Year over Year 3-Year Average 5-Year Average 10-Year Average Operating Incom Year over Year 3-Year Average 5-Year Average	me %	-3.31 1.76 3.59 5.54 5.13	5.83 1.83 3.3 5.39	5 12.18 5 4.71 1 4.58 9 6.15	2.08 6.62 3.88 5.99	1.95 5.30 3.62 5.07	-2.36 0.53 3.83 3.71	-7.39 -2.68 1.09 2.19	-3.11 -4.32 -1.83 1.32	-7.32 -5.96 -3.71 0.01	-7.87 -6.12 -5.64 -1.12	1.14
Year over Year 3-Year Average 5-Year Average 10-Year Average Operating Incom Year over Year 3-Year Average 5-Year Average	me %	1.76 3.59 5.54	1.8 3.3 5.3 10.6	5 4.71 1 4.58 9 6.15	6.62 3.88 5.99	5.30 3.62 5.07	0.53	-2.68 1.09	-4.32 -1.83	-5.96 -3.71	-6.12 -5.64	-
3-Year Average 5-Year Average 10-Year Average Operating Incom Year over Year 3-Year Average 5-Year Average	me %	1.76 3.59 5.54	1.8 3.3 5.3 10.6	5 4.71 1 4.58 9 6.15	6.62 3.88 5.99	5.30 3.62 5.07	0.53	-2.68 1.09	-4.32 -1.83	-5.96 -3.71	-6.12 -5.64	-
5-Year Average 10-Year Average Operating Incom Year over Year 3-Year Average 5-Year Average 10-Year Average	me %	3.59 5.54 5.13	3.3 5.3 10.6	1 4.58 9 6.15	3.88 5.99	3.62 5.07	3.83	1.09	-1.83	-3.71	-5.64	
10-Year Average  Dperating Incom  Year over Year  3-Year Average  5-Year Average  10-Year Average	me %	5.54	10.6	9 6.15	5.99	5.07						
Operating Incom Year over Year 3-Year Average 5-Year Average 10-Year Average	me %	5.13	10.6				3.71	2.19	1.32	0.01	-1.12	
Year over Year 3-Year Average 5-Year Average 10-Year Average	me %			5 13.64	-1 93							
3-Year Average 5-Year Average 10-Year Average				5 13.64	-1 93							
5-Year Average 10-Year Average		15.44			1.55	1.87	-6.45	-7.69	6.33	7.28	2.34	2.2
10-Year Average		15.44	25.5	6 9.75	7.24	4.32	-2.23	-4.18	-2.81	1.73	5.29	
		13.88	13.2	8 14.11	17.14	5.72	3.28	-0.40	-1.71	0.07	0.16	
		7.75	9.1	2 12.20	14.75	11.64	8.45	6.22	5.90	8.27	2.90	
Net Income %												
Year over Year		5.51	8.69	9 11.26	-0.70	2.22	-14.82	-4.80	3.47	10.79	14.10	
3-Year Average		8.69	27.3	5 8.46	6.29	4.14	-4.74	-6.07	-5.68	2.96	9.36	
5-Year Average		14.84	13.7	1 9.20	17.94	5.31	0.89	-1.75	-3.16	-1.02	1.18	
10-Year Average		8.86	9.6	0 12.89	19.85	14.27	7.64	5.70	2.83	8.04	3.22	
EPS %												
Year over Year		9.31	11.4	4 15.07	1.71	3.54	-13.15	-0.41	13.33	17.10	18.37	0.4
3-Year Average		13.24	32.2	5 11.91	9.25	6.61	-2.93	-3.61	-0.67	9.74	16.25	
5-Year Average		18.09	17.5	6 13.24	22.04	8.10	3.24	0.94	0.64	3.51	6.32	

[Morningstar Data: Full Key Ratios Data > Scroll down to "Key Ratios" > click "Growth" tab > EPS% Latest Qtr. column then the most recent year's column.]

### 1. WHAT IS THE COMPANY'S EARNINGS-PER-SHARE (EPS) GROWTH RATE?

<u>Earnings-per-share</u> is the total dollar amount of profit the company made after it paid all expenses, including taxes, during a particular quarter or year, divided by the number of company shares in circulation. Earnings-per-share is used rather than the dollar profit figure because the smaller number is easier to understand. For example, it is much easier to deal with McDonald's current earnings-per-share of \$4.64 than its total profit figure of \$4,946,000,000. A company reports its earnings-per-share at the end of each quarter and each fiscal (business) year.

Earnings-per-share is the standard measure of company growth and profitability. It means selling goods and services for more than it costs to produce them. Expanding profits are necessary to fund continued company growth. Expanding profit also creates investor interest in the company. The more shares investors buy, the more the stock price rises.

The growth rate of earnings-per-share is how rapidly the earnings are increasing rather than just the dollar amount of increase. The growth rate is the percentage change of earnings from one year to the next year or from one quarter to the same quarter the next year. The percentage change in earnings from year to year is more meaningful and revealing about a company's health than the dollar increase or decrease. It is the *rate* of growth that matters to investors. Are the company's earnings growing 5, 10, or 15 percent a year?

A company's increased EPS come from an improvement in sales, an increase in the price for its goods and services, a more efficient operation resulting in higher profits, a decrease in the number of available shares, and a lower income tax bracket. Decreased EPS result from a decrease in sales, a lower price for the company's goods and services, higher operational







costs—labor, inputs, increased employee benefit costs, higher pension costs—a higher income tax bracket, and additional shares of stock in circulation.

The 3-year and 5-year growth rates are a yard stick for measuring the company's ability to grow over the longer term. However, when evaluating a company's EPS growth rate, focus primarily on the company's latest quarter and previous year's growth rates. They indicate how the company is doing currently. When buying a stock, its latest quarterly earnings-pershare growth rate should be up. The earnings-per-share growth rate (percent increase) is the bottom line information for investors.

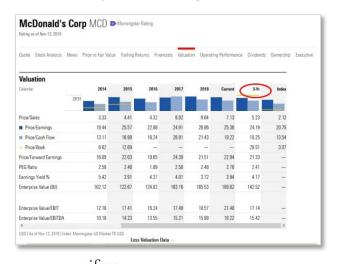
The earnings of quality large, *slow growth* companies tend to increase by 6 to 10 percent a year. These companies often pay substantial dividends. They are the more conservative stocks. *Intermediate growth* companies grow their earnings from 12 to 20 percent a year. Usually, they are the mainstay of a portfolio. They provide some stability and some growth. *Rapid growth* companies grow their earnings from 25 to 45 percent a year. These companies are smaller companies that involve greater risk. Their stock prices may increase quickly, yet, they tend to decline even more quickly. They can substantially add to the value of a portfolio but with a higher degree of risk.

2. What is the EPS <u>Five-Year Growth</u> Rate Forecast for the company and the industry?**	Company	%	Industry	%
Is the forecast for the company EPS				
growth better than the industry?		Yes		No

<sup>\*\*</sup> If a company's earnings increase on an average of 15 percent a year, the stock's price tends to double within five years. The company's forecasted growth rate should nearly equal or be above the industry forecasted growth rate.

# 2. WHAT IS THE EPS FIVE-YEAR GROWTH FORCAST FOR THE COMPANY AND THE INDUSTRY?

What percentage of growth do analysts expect from the company and the industry in the coming five years? The five-year forecasted growth rate gives you a general idea of how the company and the industry may do in the coming years. However, no one really knows what the next five years will bring.



[Morningstar Data: Click Valuation tab > find the 5-Yr column on the Valuation table) May not always list a Five-Year Growth Forecast.]











Sales/Revenue Growth								
What is the company's sales/revenue growth rate?*								
		Year- Over-						
Last		Year						
Qtr	%	(1 yr.)	%	3-Year	%	5-Year		%
Is the sale	Is the sales growth rate increasing?				Yes		No	

<sup>\*</sup> You want your company's sales/revenues to continually increase on an average between 10 and 25 percent a year. The company needs its sales to grow in order to increase its earnings/profit.

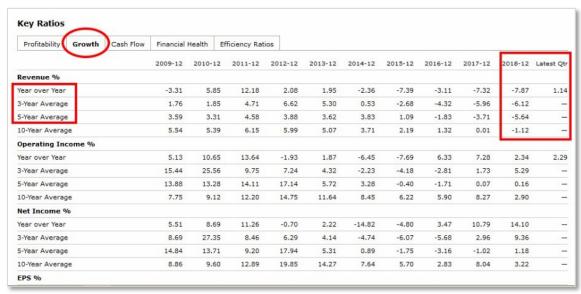
#### 3. WHAT IS THE COMPANY'S SALES/REVENUE GROWTH RATE?

The term sales and revenues are used interchangeably. It means the total amount of money a corporation received from its various sources of income (products and services) during the quarter or year. Revenues state how much business—the dollar amount—the company did during the quarter or the year.

A company must have growing sales to support its earnings growth. Earnings come from sales. Generally, a company's sales grow more slowly than its earnings, therefore, its sales growth rate will be less than its earnings-per-share growth rate.

A company can increase its revenues by increasing its prices, selling more units, developing new products or buying another company. Revenue will decrease if a company has to cut its prices, has a decline in same store sales, or experiences a general decrease in sales.

Be sure the company's most recent quarter and year's growth rates are increasing. Slumping sales sooner or later mean slumping profits, loss of investor interest, and a decreasing stock price.



[Morningstar Data: click Key Ratios tab > select "Full Key Ratios Data" > scroll down to Key Ratios section > click Growth tab > Revenue% Latest Qtr. Column, then the most recent year's column.]





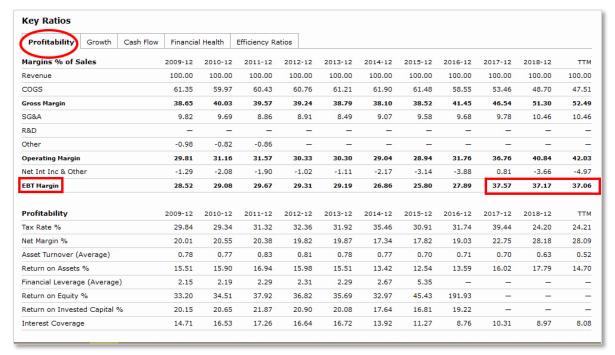






Profit Margin									
1. What is the company's EBT (earnings-before-tax) margin?*									
				TTM (Trailing 12					
2012	%	2013	%	Months)	%				
Has the	company's	EBT Margin	held						
steady?					Yes		No		

<sup>\*</sup> You want your company to continually make additional profit from each dollar of sales. A 0.5 change is significant.



[Morningstar Data: click Key Ratios tab > scroll down to Key Rations section > click Profitability tab>under Margins % of Sales find EBT Margin > to the two most recent years and the TTM column (TTM means Trailing Twelve Months).]

### 1. WHAT IS THE COMPANY'S EBT (earnings-before-tax) MARGIN?

The EBT (earnings-before-taxes) margin is also known as the pretax profit margin. Many investors speak of EBT simply as profit margin. Profit margin is the ratio of sales to profit. It states the percentage of each sales dollar that is profit. In other words, how many cents from each sales dollar ends up as profit.

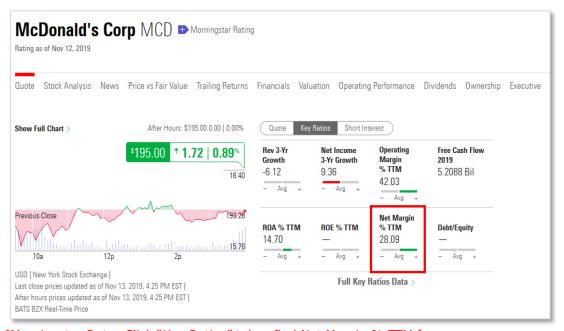
Profit margin is a way to quantify quality management. It measures how efficiently and economically a company makes its money. Profit margin measures management's ability to generate profit from its sales. A good manager knows how to make money and how to spend money wisely to make additional money. A company with quality management will have a higher profit margin than of its competitors.



You want your company's profit margin to be holding steady or rising slightly. A 0.5 percentage increase or decrease is significant. If a company's profit margin is decreasing, its earnings will decrease. Investors, sooner or later, will discover this decrease in profit margin and the decrease in earnings that follows; they will begin selling their shares which will drive down the stock price.

2. How does the company's Net Margin (after-tax profit margin) compare with the industry average?**	Stock	%	Industry	%
Is the company's Net Margin better				
than the industry average?		Yes		No

<sup>\*\*</sup> You want your company to make more profit from each sales dollar than the average company in its industry.



[Morningstar Data: Click "Key Ratios" tab > find Net Margin % TTM ]

# 2. HOW DOES THE COMPANY'S NET MARGIN (after-tax margin) COMPARE WITH THE INDUSTRY AVERAGE?

The worksheet uses <u>Net Margin</u> (after-tax profit margin) to compare the company's profit margin with its industry average because data providers, including Morningstar, use net margin rather than pretax margin for company and industry comparisons.

Profit margins are industry specific. To compare the profit margins of two companies they must be in the same industry. Profit margins vary significantly from industry to industry. For example, the profit margin for grocery stores is 2 percent—the company makes two cents from each dollar you spend at the checkout counter. The profit margin for software companies is 28 percent.



Your company's profit margin should be above the industry average profit margin. Your company should be better than the average company in its industry. The company with a strong profit margin—a low-cost producer—is better able to withstand economic and industry downturns than its competitors that have lesser profit margins.

PEG Ratio		
What is the company's <u>PEG Ratio</u> ?*		
Is the company's PEG Ratio less than		
1.65?	Yes	No

### WHAT IS THE COMPANY'S PEG RATIO?

Peter Lynch (*One Up On Wall Street*) devised PEG to determine whether he was overpaying for a company's ability to grow its earnings. The PE of PEG stands for the stock's p/e ratio, which is the ratio of the stock's price to the company's earnings-per-share. It indicates how much hype there is for the stock (with or without a sound basis); the higher the p/e, the more investors are bidding up the price of the stock in comparison with the company's earnings. The G of PEG stands for the growth rate of the company's earnings-per-share. Thus, the PEG ratio is the company's p/e compared with the company's earnings-per-share growth rate—the company's PE ÷ Company's earnings growth rate.

Is the stock overpriced or is it a bargain?

0.5 to 0.9	The stock is a bargain (under priced) if it is a quality company.
1.0 to 1.5	The stock is reasonably priced.
2.0 to 2.5	The stock is overpriced.

If the PEG is 0.5, the PE is half the earnings-per-share growth rate. The stock is underpriced. The company's earnings are growing faster than the market has recognized. If the PEG is 1.0, the PE equals the earnings growth rate, and the stock is fairly priced. The market has fairly priced the company's growth rate. If the PEG is 2.0, the PE is twice the earnings growth rate, and investors are paying a premium for the company's earnings growth rate. The upside potential for the price has diminished while the downside has increased. The company may or may not be able to deliver the expected earnings growth. If a quality stock is overpriced, it does not mean the price will not rise. It means the price will appreciate less with a greater risk of decrease than if the stock were fairly priced or underpriced.

Above all, regardless the PEG, the company must be a quality company. Otherwise, it generally becomes an expensive mistake.











<sup>\*</sup> If the PEG Ratio (ratio of the stock's PE to its earnings Growth Rate) is above 2.5, you may be overpaying for the company's earning power.



[Morningstar Data: Valuation tab > PEG Ratio.]







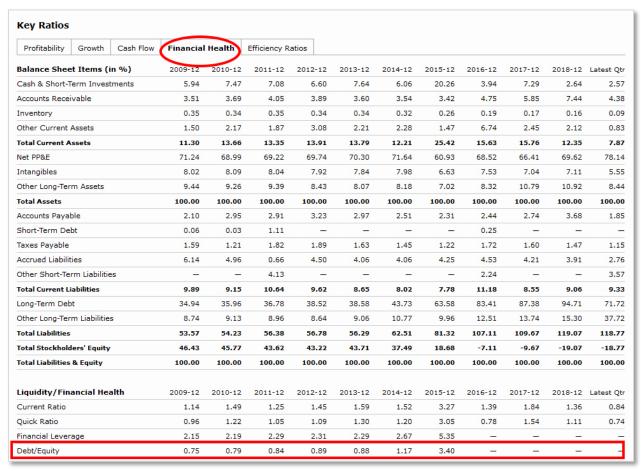




### C. FINANCIAL CONDITION

Debt Ratio						
What is the company's Long-Term Debt-to-Equity Ratio?*						
Debt/Equity	X 10	0 =p	ercent debt			
Is the debt less	s than 55%?	Yes	No			

<sup>\*</sup> The less debt, the better.



[Morningstar Data: Key Ratios tab > scroll down to Key Ratios section > click Financial Health tab > scroll down to last item on the page, Debt/Equity, use the most recent full year column.]

# WHAT IS THE COMPANY'S LONG-TERM DEBT-TO-EQUITY RATIO?

The long-term debt-to-equity ratio is the most frequently used measure of financial strength and financial health. It measures how much the company owes in comparison with how much it owns. Long-term debt is the dollar value of everything the company owes, such as mortgages, notes, loans, and bonds, that is due at some time beyond the current year. Equity is the dollar value of everything the company owns.











A financially strong company owns more than it owes. Investors can compare any two companies. They can be in different industries; however, some industries require more long-term borrowing than other industries

### D. INSTITUTIONAL OWNERSHIP

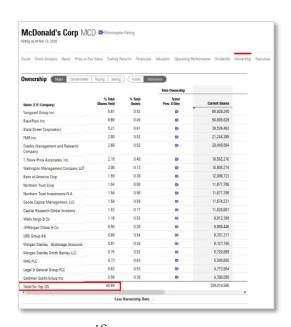
Institutional Ownership								
What percent of the company is owned by institutions? *								
% Owned by								
Institutions								
Is institutional ownershi	p less than 90%?		Yes		No			

<sup>\*</sup> Institutional buying drives up the stock price. When there is 90 to 95% institutional ownership, the major institutional buying and stock price rise may have taken place.

### WHAT PERCENT OF THE COMPANY IS OWNED BY INSTITUTIONS?

Institutional ownership is the percentage of the company's shares that are owned by mutual funds, pension funds, retirement funds, and large endowment funds. The money managers of these funds buy and sell large blocks of stock—tens of thousands of shares—which impacts the buying and selling price of the stock. Institutional investors tend to move as a group; they tend to buy and sell at about the same time. Institutions are responsible for between 70 and 80 percent of all stock trades. When institutions buy large blocks of stocks, even over a period of several months, it drives up the price of the stock. When institutional investors sell, they seem to sell much faster than they buy, which can drive the stock's price down quickly.

If you buy a stock that has less than 90 percent institutional ownership, you will benefit from the stock rise as additional institutions buy into it. At 95 percent institutional ownership, a majority of the institutional buying and the ensuing price increase may have taken place.



[Morningstar Data: Ownership tab > click "Institutions" > find "Total (for Top 20)."]





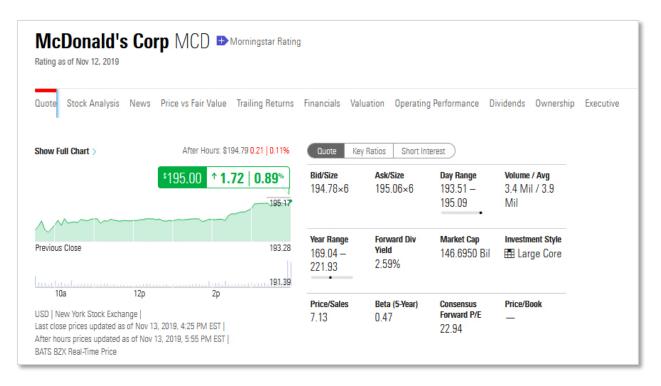






# E. STOCK PRICE

Stock Price						
1. What is the stock's price?						
52	5	52				
week	v	veek		Current		
Low	H	ligh		Price		



### 1. WHAT IS THE STOCK'S PRICE?

During the year, many stock prices fluctuate 50 percent or more between their 52-week highs and lows. When the price hits a new high or approaches and old high, it generally drifts downward before it continues to rise. It works well to buy when the stock price is 5 to 8% below its 52-week high and trending up. That way you are not buying at the high only to have the price decline before it goes up again.











2. What is the stock's <u>current price trend</u> ?*					
Is the stock price in an uptrend?		Yes		No	

<sup>\*</sup> Pay particular attention to the most recent 3-month section of the price chart.

## 2. WHAT IS THE STOCK'S CURRENT PRICE TREND?

Check the stock's price chart to be sure the price is moving up; look closely at the most recent two or three months. It is trending up if each upward spurt is higher than the last. A stock price moves up for a while, trades in a narrow flat range or drifts down before it takes another growth spurt. If the price is trending down, the price drops and comes back up a bit, then drops again. It is a down trend if each price rise is lower that the previous one. No one can tell how far down a stock price will drift. Wait until the price is convincingly on its way up before you buy.



[Morningstar Data: Quote tab > click "Show Full Chart" > click on 1Y to see the price trend over 1 year.]











# F. WRAP-UP QUESTIONS

Wrap Up				
1. Tally your Yes and No responses.*				
Number of Yes		Number of No		
responses		responses		

### 1. HOW MANY YES AND NO ANSWERS?

Add the yes and no answers. Your company should have a majority of yes answers. The more yes answers the stronger the company, the healthier it is, and the higher its quality. However, few companies will have all yes answers.

2. What are your thoughts on the pros and cons of investing in this company?				

#### 2. WHAT ARE YOUR THOUGHTS ABOUT THIS COMPANY?

Review each section of the worksheet. Consider each criteria and its evaluative statements. List the reasons the stock might or might not be a good one to purchase. When you have finished evaluating the data, summarize your findings by writing a short description of the company. Include specific information about the company's profitability, financial condition, share ownership, products and services, and price trend. Think of it as a sales pitch for the stock or as a warning to your best friend — why he or she should not buy it. Often, it requires analyzing several stocks to find one that merits purchase.

## CONCLUSION

The worksheet gives students a way to systematically gather and evaluate company information. Whatever their final decision regarding the stock, whether to buy it, follow it, or discard it, they have based their decision on solid information. It begins to take the guess work out of investing in individual stocks.

Investing is a craft. It is a disciplined art, not a precise science. It requires patience, persistence, consistency, objectivity, discipline, and responsibility.

Thank you for helping your students understand what makes a quality company and for giving them the opportunity to learn about the market and investing in stocks. If you have any questions, concerns, or frustrations, contact <a href="mailto:smg@sifma.org">smg@sifma.org</a>











<sup>\*</sup> If you are buying the stock, it should have a majority of YESs. The more yes answers, the higher the quality.